WHAT IS CLAIMED IS:

1. An Infra Red (IR) sensing device comprising:

an IR sensing element for detecting IR radiation, wherein the IR sensing element includes a plurality of thermopile elements with connections to both ends and to a center point of the sensing element;

a processing circuit having two inputs coupled to the IR sensing element and configured to receive and analyze the electrical signals generated by the IR sensing element;

protection circuitry coupled to the two inputs and a first potential; and

an electrically conducting housing connected to the first potential,

wherein the processor connects the center point of the sensing element to the first potential and the ends of the sensing element to the two inputs, wherein the processing circuit analyzes the signals from the ends of the sensing element as a differential pair of signals relative to the first potential.

2. The device of claim 1, wherein the processing circuit is embodied as an integrated circuit.

3. The device of claim 2, wherein the first potential is connected to the substrate of the integrated circuit.

4. The device of claim 1, wherein the processing circuit includes configuration circuitry.

5. The device of claim 1, wherein the processing circuit includes calibration circuitry.

6. The device of claim 4 or 5, wherein the processing circuit includes a non-volatile memory for storing calibration or configuration data.

7. The device of claim 6, wherein the non-volatile memory is programmed after manufacture.

8. The device of claim 6, wherein the non-volatile memory is programmed after the device has been installed in its operating location.

9. An Infra Red (IR) sensing device comprising:

an IR sensing element for detecting IR radiation, wherein the IR sensing element includes a plurality of serially connected thermopile elements;

a processing circuit configured to receive and process the electrical signals generated by the thermopile elements, the processing circuit having first and second inputs coupled to the two ends of the series of thermopile elements and a third input coupled to a center point of the series of thermopile elements and to a first potential; and

protection circuitry coupled to the two inputs and the first potential;

wherein the processing circuit processes the signals at the first and second inputs as a differential pair of signals relative to the first potential so as to produce a temperature readout signal.

10. The sensing device of claim 9, further comprising an electrically conducting housing connected to the first potential.

11. The sensing device of claim 9, wherein the protection circuitry includes a pair of diode structures, each diode structure coupled to the first potential and to one of the first and second inputs.

12. The sensing device of claim 9, wherein the processing circuit is implemented on a first integrated circuit.

13. The sensing device of claim 12, wherein the sensing element is implemented on a second integrated circuit.

14. The sensing device of claim 12, wherein the protection circuitry is implemented on the first integrated circuit.

15. The sensing device of claim 9, further comprising a conductive housing connected to the first potential.